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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,968	11/26/2003	Li Ding	25629/16	9003
21710 7590 06/23/2009 BROWN RUENICK LLP ONE FINANCIAL CENTER BOSTON, MA 02111				
EXAMINER				
YU, GINA C				
ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/722,968

Applicant(s)

DING ET AL.

Examiner

GINA C. YU

Art Unit

1611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2009.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
4a) Of the above claim(s) 1--25, 43-45 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 26-42, 46-56 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/5508)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Inventor's Patent Application
6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 23, 2009 has been entered.

Claim Objections

Claims 53-56 are objected because the claim status of the apparently new claims indicate the claims had been previously presented. See 37 CFR 1.121 (c). The record indicates claims 53-56 were presented for the first time in the March 23, 2009 amendment.

Claims 51 and 52 are identical and depend on the same base claim, claim 27.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 26, 35, 46, and 47 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the

inventor(s), at the time the application was filed, had possession of the claimed invention, and applicant fails to point out where in the original disclosure such subject matters find support.

With regard to claim 26, the phrases "substantially to avoid absorption of other bead ingredient" in lines 6-7 and "substantially impermeable" in line 4 lack support from the original disclosure. There is no mention in the applicant's original disclosure that the present method of incorporating density-control agent to the gel-liquid medium is "to avoid absorption of other bead ingredients".

In claim 35, there is no support for the discharge temperature at 45° C. Examples indicate that mixture of gel, polymer, density-control agents in water (mixture III) is cooled to 45 °C but discharged to the liquid paraffin at 5 °C.

With regard to claim 46 the phrase "non-porous particles which do not substantially adsorb oil" lack support from applicant's original disclosure.

With regard to claim 47 the phrase "a single gas bubble" lack literal support from the original disclosure.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 26-42, 46-52, and 54-56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 26 is vague and indefinite because the term "other bead ingredients" is not defined. It is not clear what "other" bead ingredients are intended.

In claim 27, line 9 what is "a density control agent carrier"? How does applicant's specification define what components are used as "a density control agent carrier"? In claims 28, 30, 31, and 56 does the "said carrier" refer to "the density control agent carrier"?

In claim 35, does "discharge temperature" mean the cooling temperature of the third mixture of claim 27 or the temperature at which the third mixture is formed into gel beads?

Claim 47 recites the limitation "the plurality of hollow particles" in line 1. There is insufficient antecedent basis for this limitation in the claim.

In claims 54 and 55, what active method steps are taken by the limitations "at least some of which incorporate gas filled chambers" and "at least some of said particles incorporating chambers containing gas"?

Claims 34 and 40-42 are vague and indefinite because the claims do not define based on what the percentage of "the gel-particles" is measured, and it is not clear what "the gel-particles" are. Are "the gel-particles" the gel beads or the gelling agents? In

claim 34, how does the restraining polymer contain gel particles? Claim 40 recites 1.5 % of the gel-particles are in the gelling agent. Does this mean the gelling agent is in the form of particles and used in the amount of 1.5 % by weight of the total composition of the mixture, or does the gelling agent contain particles in an amount of 1.5% by weight of the gelling agent? Based on what component is "about 1.5%" measured? Similarly, what do the amount "about 0.01-5 % of the gel particles" and "about 0.02 to about 0.1 % of the gel particles" present in the density-control agent represent? The claims are vague and confusing. Furthermore, how do the hollow microspheres comprise gel particles unless the microspheres fuse the gel particles on the surface? These claims are unclear and not examined on the merits.

The remaining claims are rejected because they depend on the indefinite base claims.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 26-33, 35-39 and 46-56 are rejected under 35 U.S.C. 102(b) as being anticipated by Delrieu et al. (US 6319507) as evidenced by Robinson et al. (U.S. Patent No. 6,852,266 B2).

Delrieu discloses a method of producing gel beads for cosmetic compositions, wherein the particles are formed by i) adding agar granules, polyquaternium 24 in distilled water and heated to 90C; which is allowed to cool to 50 C and pumped

through a needle to form droplets exposed to a liquid paraffin oil bath maintained at 5C.

. See Example 1. See instant claims 29 and 31. The reference teaches 2 mm gel beads are formed in the oil phase and the sizes depend on the inner diameter of the needle.

Example 15 discloses a method of agar beads with solvent, comprising i) adding 1.5 g of agar granules in 97 g of water, heated to dissolve the gelling agent; ii) mixing 1.6 g silica shells (apparent density 0.5-1.0 g/in³), fragrance, dipropylene glycol, which is then dispersed in Crodacel QS (PG-hydroxyethylcellulose stearyldimonium chloride, a restraining polymer in water); iii) adding the two mixtures and injecting or dispersing said mixtures in cold oil to form stable and consistent gel beads containing silica beads. Since the silica is first mixed with fragrance, an oily component, and then dispersed in the aqueous solution comprising the cationic polymer, instant claims 36, 28, 30, 31, and 56 are met.

Delrieu teaches porous inner particles such as silica spheres or porous microspherical inert polymers such as polyethylene or polypropylene particles are added to trap gel-inhibiting solvents; these microspheres do not interfere with gel formation. See col. 19, line 40 - col. 20, line 20.

In col. 13 lines 24-30, Delrieu discloses that the gel beads can be used in cosmetic compositions in concentrations of from 0.1-90 weight percent anticipating the "...method...wherein the gelling agent comprises about 1.5%...of claim 40.

In col. 14 lines 58-61, Delrieu teaches the cooling temperature is maintained at about 50°C. The office generally gives the term "about" a 10% range thus "about 50°C" is interpreted as 45-55°C. See instant claim 35.

In example 5 the restraining polymer is present in a concentration of 7.5% by weight and the FD&C Blue colorant is present in a concentration of 0.5% by weight of the composition anticipating "...method...comprising pre-dispersing a pigment..." of claim 39.

With respect to the density-reducing agent dispersed to give the particles a bulk density set forth in claims 49 and 50, since Delrieu teaches the same gelled bead product constitute with the same amount of the density-control agent set forth in claim 41, therefore, it would inherently provide the same density as set forth in claims 49 and 50.

Robinson et al. disclosed that the term "porous" is defined to mean certain "hollows". (column 5, line 1). Robinson et al. is provided as an evidence to show that the claimed hollow particles set forth in claim 52 is well known in the art to interpret and encompassed by the term "porous" taught by Delrieu.

In response filed on March 23, 2009, applicant asserts the new claim 53 requires the density-control agent entrap gas, but the prior art porous/hollow microspheres also inherently contain air, meeting the instant claim. Applicant also assert new claim 54 requires a further step of calculating the amount of the density-control agent in order to

provide a desired density adjustment. However, such method step amounts to a mental step, which is not given patentable weight.

Claim 55 recites the density-control agent comprises a temperature-sensitive expandable thermoplastic, and applicant asserts Delrieu fails to such material. However, applicant has admitted in applicant's own specification that silica is among the useful temperature-sensitive expandable thermoplastic microspheres whose final volume and density can be controlled during processing by suitable temperature management. See spec. p.1 1, lines 11 - 20; p. 13, lines 11-16. Thus, applicant's argument that Delrieu fails to teach the density-control agent of the present invention is inaccurate.

Response to Arguments

Applicant's arguments filed on March 23, 2009 have been fully considered but they are moot in part in view of the new grounds of rejections as discussed above.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GINA C. YU whose telephone number is (571)272-8605. The examiner can normally be reached on Monday through Friday, from 9:00AM until 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sharmila Landau can be reached on 571-272-0614. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gina C. Yu/

Primary Examiner, Art Unit 1611